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CORRELATION OF BODY MASS INDEX WITH THE HAND GRIP STRENGTH AND ADDUCTOR POLLICIS MUSCLE THICKNESS IN ELDERLY PATIENTS WITH RHEUMATOID ARTHRITIS AND SYSTEMIC LUPUS ERYTHEMATOSUS IN A BRAZIL NORTHEAST REFERENCE CENTER

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ABSTRACT

Introduction: Rheumatoid arthritis and systemic lupus erythematosus are autoimmune, chronic and progressive diseases, which can be get worst in the presence of muscle mass loss due to physical inactivity and continuous inflammatory. Therefore, estimate body composition can assist in the treatment of these diseases. **Objective:** To evaluate the correlation of body mass index with handgrip strength and adductor pollicis muscle thickness in elderly patients with rheumatoid arthritis and systemic lupus erythematosus followed in a reference center in Brazil. **Material and Methods:** Cross-sectional study carried out in a rheumatology outpatient clinic in a reference center in Northeastern Brazil (Recife / PE). Elderly patients with rheumatoid arthritis and systemic lupus erythematosus. Anthropometric measurements of weight, height and Body Mass Index (BMI) were taken, in addition to the measurement of body composition: calf circumference (CC), arm circumference (MUAC), adductor pollicis muscle thickness (APMT) and strength of hand grip (HGS). The data were treated using the SPSS version 17.0 for Windows and Excel 2010. Pearson correlation and the Chi-square test were used for analysis. The level of significance was set at 5%. The IMIP Research Bioethics Committee approved the present study under No. 19163619.1.0000.5201 the participants' guardians signed the Free and Informed Consent Form (ICF). **Results:** The study included 19 patients aged 60 to 85 years and a mean age of 70.05 years \pm 8.47 SD, 94.74% of whom were female. The BMI, MUAC, CC, APMT and HGS mean of (26.93g / m² \pm 5.75DP), (28.85 \pm 4.06DP), (34.79 \pm 3.62DP), (11.52 \pm 4.437DP) and (10.81 \pm 6.77DP) respectively. The BMI showed that 31.26 were overweight, while HGS showed that 66.7% had a deficit in handgrip strength justified by the high prevalence of depletion of the adductor pollicis muscle, which identified that 97.4% showed signs of depletion of this musculature. There was a moderate correlation between BMI, MUAC and CC (r = 0.453) and (r = 0.426), respectively, while for BMI and APMT the correlation was weak (r = 0.348), as well as the correlation between BMI and HGS was r = 0.005. **Conclusions:** There was a prevalence of eutrophic and overweight elderly people, however with loss of muscle mass and decreased hand grip strength. This may suggest a greater risk for the development of senile sarcopenia.

Keywords: rheumatoid arthritis, systemic lupus erythematosus, obesity, elderly.

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